

TABLE-BASED PRE-DISTORTION FOR AMPLIFIER SYSTEMS

ABSTRACT OF THE DISCLOSURE

Frequency-independent and frequency-dependent pre-distortion is implemented using look-up
5 tables to retrieve pre-distortion parameters. To compensate for changes in amplifier operating
characteristics over time, fixed pre-distortion tables can be used by appropriately offsetting the index
values used to retrieve the pre-distortion parameters. The overall amplifier gain as well as the biases
applied to one or more amplifier stages are also preferably controlled. In addition, the frequency-
independent and/or frequency-dependent pre-distortion tables can be updated either periodically or as
10 needed, by mapping a measure (e.g., average input signal power) to one or more parameters using
equations (e.g., piecewise linear curves), where the parameters are applied to one or more polynomials to
update the tables.